

**IN THE UNITED STATES PATENT
AND TRADEMARK OFFICE**

In re: application of:	:	
Sung-Tsuen Liu	:	
	:	Group Art Unit: 1754
Serial No. 10/717,310	:	
	:	Examiner: Peter J. Lish
Filed: November 19, 2003	:	
	:	Confirmation No.: 6485
For: Stabilized Vaterite	:	

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P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF OF APPELLANT

This is a Brief on Appeal submitted electronically in support of the Notice of Appeal previously mailed on February 15, 2006. This Appellant's Brief is being filed electronically on May 15, 2006 along with a request for a one-month extension of time.

This brief contains these items under the following headings, and in the order set forth below:

- I. REAL PARTY IN INTEREST
- II. RELATED APPEALS AND INTERFERENCES
- III. STATUS OF CLAIMS

- IV. STATUS OF AMENDMENTS
- V. SUMMARY OF INVENTION
- VI. ISSUES PRESENTED ON APPEAL
- VII. GROUPING OF CLAIMS
- VIII. ARGUMENTS
- IX. APPENDIX OF CLAIMS

I. Real Party In Interest

The real party of interest in this appeal is the J. M. Huber Corporation of Edison, New Jersey. This Application is presently assigned to the J. M. Huber Corporation by an assignment document dated 13 November 2003.

II. Related Appeals and Interferences

Currently, there are no related appeals or interferences known to Appellants, Appellants' undersigned attorney, or known to the Assignee, that will directly affect or be affected by the Board's decision in the present appeal.

III. Status of Claims

The status of the claims in this application are:

A. Total Number of Claims in Application

Claims in the application are: 1- 5

B. Status of all of the Claims

1. Claims canceled: Claim Nos. 6 - 20
2. Claims withdrawn from consideration but not cancelled: NONE
3. Claims pending: 1-5
4. Claims allowed: NONE
5. Claims rejected: 1-5

C. Claims on Appeal

The claims on appeal are: 1-5

IV. Status of Amendments

Appellants have filed an After-final Amendment subsequent to the Examiner's final rejection on 11 January 2006. In an advisory action mailed on 24 January 2006 the Examiner maintained his rejection in response to Appellant's arguments, and refused to enter the amendments contained in Appellants 11 January 2006 After-final Amendment.

V. Summary of the Invention

The present invention relates to crystalline precipitated calcium carbonate compositions, known as vaterite, which impart improved cleaning and abrasive characteristics when included within a toothpaste or dentifrice. It has now been discovered that RDA and PCR are dependent on the abrasive particle shape, primary particle size and the size of the particle aggregates. Indeed, by the present invention, abrasive vaterite has been developed that not only has excellent cleaning performance, but shows this cleaning performance at very low abrasiveness. Until now it had been thought that there was a linear relationship between RDA and PCR, so that a formulator has to balance the acceptable RDA level with the resulting PCR value. (Specification, Paragraphs 0022-0025).

VI. Issues Presented on Appeal

Two issues presented for review by the Board on appeal are:

- (i.) Whether claims 1-5 have been properly rejected under 35 U.S.C. §102 as being anticipated by Goffin et al., U.S. Patent No. 5,290,353 ("Goffin"); and
- (ii.) Whether 4-5 have been properly rejected under 35 U.S.C. §103 as being obvious in view of Goffin.

VII. Argument—Rejection under 35 U.S.C. §103

(i.) Whether claims 1-5 have been properly rejected under 35 U.S.C. §102 as being anticipated by Goffin.

(A) With Respect to Claims 1-3

(1) The Examiner's Position

On page 3 of the Office Action of May 4, 2005, the Examiner rejected claims 1 - 3 as being anticipated by Goffin. The Examiner maintains that Goffin discloses a vaterite

material having a particle size of less than 3 microns and having a size distribution factor of preferably less than 0.5, especially as relates to Figure 1 in Goffin which the Examiner asserts shows a sample of vaterite particles having sizes of between 0.7 and 2 micrometers. Specifically, the Examiner maintains that “[n]o difference is seen between the vaterite particles of Goffin et al. and those of the instantly claimed invention.”

Additionally, on page 2 of the Final Office Action of 16 November 2005 the Examiner argued for the first time, that the present claims do not actually recite that the vaterite calcium carbonate is formed into aggregates.

(2) Appellant’s Position:

The Examiner’s conclusion that the present invention, as recited in claims 1 – 3 is anticipated by Goffin is untenable because Goffin fails to teach or disclose all of the elements of the present claims. For a claim to be rejected as anticipated under 35 U.S.C. §102, it must be shown that the prior art reference teaches or suggests all of the claimed elements and limitations. (M.P.E.P. §706.02).

Thus, the claims on appeal are not anticipated by Goffin, because Goffin fails to teach or disclose all of the elements of the present claims; specifically, Goffin does not teach an aggregate particle size of less than 4 microns. Indeed, Goffin itself explicitly states that its particles are *not* present in the form of aggregates: “[t]he process according to [Goffin], especially the preparation process for obtaining a substantially spherical vaterite, not in the form of aggregates of particles.” (Goffin, Col. 2, lines 10-14).

Indeed the Examiner also acknowledges that Goffin teaches that the particles are not in the form of aggregates: "Goffin et al. additionally teaches that the particles are not in the form of aggregates". (Office Action of May 4, 2005, Page 3).

In response to the above Arguments, the Examiner has extended his own line of argument further by asserting that the claims on appeal fail themselves to recite that the vaterite calcium carbonate is formed into aggregates. (Final Office Action of 16 November 2005, page 2).

Appellants respectfully disagree with the Examiner's new argument. Present claim 1, upon which all of the other appealed claims depend on, recites:

Claim 1. A vaterite calcium carbonate having a primary particle size of about 0.2 μm to about 3 μm and an aggregate particle size of less than about 4 μm .

The Examiner's assertion that the present claims do not recite the presence of vaterite calcium carbonate formed into aggregates fails to comply with the basic guidelines for claim interpretation. Specifically, M.P.E.P. §2111 requires that claims must be given their broadest reasonable interpretation. Of specific import is the following passage:

The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999). M.P.E.P. §2111.

No person of ordinary skill in the art would interpret claim 1, which recites an aggregate particle size range as not also encompassing vaterite particles in the form of aggregates. Accordingly, the Examiner may not simply interpret away the presence of

particles in the form of aggregates as recited in the present claims. Accordingly, Appellants maintain that claims 1-3 are not anticipated by Goffin.

For all of these reasons, the Examiner's rejection of claims 1-3 under 35 U.S.C. §102 based on Goffin is improper, and the board should overturn the rejection of claims 1-3.

(B) With Respect to Claims 4-5

(1) The Examiner's Position

The Examiner has rejected claims 4-5 under 35 U.S.C. §102(b) as being anticipated by Goffin. With respect specifically to claims 4-5, the Examiner acknowledges that the particles of Goffin do not have the abrasion values recited in the present claims, but nonetheless asserts that it would be expected that the particles of Goffin have the abrasion values within the recited ranges, because:

Where, as here, the claimed and prior art products are identical or substantially identical, or a produced by identical or substantially identical processes, the burden of proof is shifted to the applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. *See In re Best*, 195 USPQ 430. (Office Action of May 4, 2005, page 3).

And additionally because:

Where, as here, the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, the burden of proof is shifted to the applicant, as in *re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). (*Id. See also* Office Action of November 16, 2005, page 2.)

(2) Appellant's Position:

Appellants respectfully disagree with the Examiner's analysis because the Examiner has not made an adequate showing to support an assertion of inherency. (Although the Examiner has not specifically used the word "inherency", the Examiner is explicitly invoking the doctrine in order to assert that the subject matter of claims 4-5, specific Brass Einlehner values, are inherently found in the Goffin reference). In order to support an assertion that an element or feature is inherently present in the prior art, the Examiner must show, by objective evidence or cogent technical reasoning, that the missing element necessarily flows from the teachings of the prior art. The fact that an element may be present in the prior art is not sufficient to establish inherency. (M.P.E.P. §2112).

The Examiner has not met this burden. The only showing offered by the Examiner in support of the inherency suggestion is the Examiner's assertion (made most fully in the Office Action of May 4, 2005, as summarized above in subsection 1 above) that, "because the particles of Goffin et al. have the same particle sizes as those claimed, the properties of the particles of Goffin et al. are expected to meet the limitations of claims 4-5." Appellants respectfully assert that this showing is not adequate to support the Examiner's inherency assertion. As stated above, the M.P.E.P. requires that the missing element necessarily flows from what is taught by the prior art. The Examiner asserts only that the properties of Goffin are "expected" to be identical to the elements recited in claims 4-5. The Examiner has made no showing that the elements of claims 4-5 must necessarily flow from the properties disclosed in Goffin.

Second, even assuming, *in arguendo*, that the inherency requirements articulated by the Examiner in the Office Action of May 4, 2005 (see subsection 1, above) are a correct interpretation of the principle of inherency and anticipation, the Examiner has failed to make out a proper case for inherency even according to his own principles. For example, the paraphrased holding that the Examiner attributes to *in re Best*, requires that the Examiner show that either the product itself or the process to produce it is identical or substantially identical. The Examiner has failed to make this showing. In fact, the Examiner has failed to make any showing supporting the assertion of inherency, except merely stating *in re Best* and paraphrasing the holding of the case.

The Examiner's failure to make a showing that either the product itself or the process to produce it is identical or substantially identical is particularly important in the present case because contrary to the purported identical nature between the particles taught by Goffin and the particles described in the present claims, Applicants have noted that the two sets of particles are actually quite different. In particular, the particles as described in the present invention form aggregates while the particles in Goffin do not form aggregates. This is a substantial difference and it means that the claimed subject matter and that of the prior art are not substantially identical.

Much the same can also be said for the paraphrased holding that the Examiner attributes to *in re Fitzgerald*, which requires that the prior art disclose all of the limitations of a claim except a property or function, before the Examiner can shift the burden of proof back to the Applicants to show that the prior art composition does not exhibit the same property or function. As noted above, Goffin is silent not only on the specific properties recited in

present claims 4 and 5 (which the Examiner invokes the inherency argument for, e.g., the brass Einlehner abrasion values), but also specifically disclaims structural aspects recited in the present claims (the presence of the particles in an aggregate).

Accordingly, Appellants maintain that claims 4-5 are not anticipated by Goffin.

For all of these reasons, the Examiner's rejection of claims 4-5 under 35 U.S.C. §102 based on Goffin is improper, and the board should overturn the rejection of claims 4-5.

(ii.) Whether 4-5 have been properly rejected under 35 U.S.C. §103 as being obvious in view of Goffin.

(A.) The Examiner's Position

The Examiner has rejected claims 4-5 under 35 U.S.C. §103 as being unpatentable over Goffin. (Office Action of May 4, 2005, page 3; Office Action of November 16, 2005, page 3).

Although stating in the above-identified Office Actions that the Examiner was relying on an obviousness rejection under 35 U.S.C. §103 in the alternative to his previously stated anticipation rejections, the Examiner provided no explanation at all of this obviousness rejection. This was despite Appellant's request that the Examiner explicate his 35 U.S.C. §103 rejection, see, *inter alia*, Appellant's Amendment transmitted on September 1, 2005, pages 7-8.

For all of these reasons, the Examiner's rejection of claims 4-5 under 35 U.S.C. §103 based on Goffin is improper, and the board should overturn the rejection of claims 4-5.


Conclusion

In light of all of the reasons delineated herein, Appellants submit that rejected Claims 1-5 are patentable over the art of record. Appellant hereby requests the Board to reverse the decision by the Examiner to finally reject Claims 1-5 in the present Application.

Respectfully submitted,
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May 15, 2006

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IX. Appendix of Claims

Appealed Claims 1 -5

Claim 1. A vaterite calcium carbonate having a primary particle size of about 0.2 μm to about 3 μm and an aggregate particle size of less than about 4 μm .

Claim 2. The calcium carbonate according to claim 1, having a primary particle size of about 0.3 μm to about 2 μm .

Claim 3. The calcium carbonate according to claim 1, having an aggregate particle size of less than about 3 μm .

Claim 4. The calcium carbonate according to claim 1, having a Brass Einlehner abrasion value of between about 1 mg loss/100,000 rev. to about 5 mg loss/100,000 rev.

Claim 5. The calcium carbonate according to claim 1, having a Brass Einlehner abrasion value of between about 1 mg loss/100,000 rev. to about 2 mg loss/100,000 rev.